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10/781,482

02/17/2004

David Tsang

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12/09/2004

SAWYER LAW GROUP LLP

P.O. Box 51418

Palo Alto, CA 94303

EXAMINER

TRAN, MICHAEL THANH

ART UNIT

PAPER NUMBER

2818

DATE MAILED: 12/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/781,482

Applicant(s)

TSANG ET AL.

Examiner

Michael t Tran

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6-15 and 17 is/are allowed.
- 6) ☒ Claim(s) 1 and 14 is/are rejected.
- 7) ☒ Claim(s) 2-5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. In response to the Communications dated February 17, 2004, claims 1-17 are active in this application.

Claim Objections

2. Claims 2-5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

It appears that there is an antecedent error with regard to claims 1 and 14. In claims 1 and 14, line 4, the phrase "at least one programmable current source" appears to be stating just one current source; however, in line 5, the phrase "each of the at least one programmable current source" implies that there exists a plurality of the "at least one programmable current source". The examiner assumes that the claim only claims one current source.

It appears that the phrase "the least one second magnetic element" should be changed to "the at least one second magnetic element--". Additionally, the phrase "at least programmable current source" should be changed to "at least one programmable current source--". See claim 16, lines 4 and 5.

Claim Rejections – 35 U.S.C. § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102

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that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

4. Claims 1 and 14 are rejected, as understood, under 35 U.S.C 102(b) as being anticipated by Reohr et al. [U.S. Patent #6,404,671].

With respect to claims 1 and 14, Reohr et al. disclose a magnetic memory comprising: a plurality of magnetic memory cells [400 of figure 4b], each of the plurality of magnetic memory cells including a first magnetic element [figure 1a disclose memory cells at intersection of bit and word lines – each cells having multiple layers, which are being interpreted as being multiple magnetic elements]; at least one programmable current source [figure 6a disclose multiple current sources] for programming a portion of the plurality of magnetic memory cells, ~~each of~~ [see the above objection] the at least one programmable current source including a controller [602 of figure 6a] and a current source coupled to the controller, the controller including at least one second magnetic element [a magnetic element of any of the plurality of memory cells], the at least one second magnetic element being substantially the same as the first magnetic element [each of the magnetic elements of the plurality of memory cells are the same], the

controller for determining a current provided by the current source based on the at least the second magnetic element [the controller is indicative of detecting the characteristics of neighboring memory cells and then produce a control signal to control the programmable current source]. See the abstract and column 1.

Allowable Subject Matter

5. Claims 6-15 and 17 are allowable over the prior art of record.
6. The following is an Examiner's statement of reasons for the indication of allowable subject matter: the prior art of records does not show (in addition to the other elements in the claim) the following:
 - ❖ Wherein the current source further includes a current mirror.
 - ❖ Wherein the controller further includes a plurality of latch circuits including the at least the second magnetic element, the plurality of latch circuits for selectively driving the current source.
 - ❖ Wherein the controller further includes a temperature sensor for allowing the current source to provide a temperature sensitive current.
 - ❖ A second adaptive current source including a second programmable current source for programming the portion of the plurality of magnetic memory cells, the second programmable current source including a second controller and a second current source coupled to the second controller, the second controller for determining a second current provided by the second current source, the second controller including at least a third magnetic element, the at least the third

magnetic element being substantially the same as the first magnetic element, the second controller controlling the second current provided by the second current source based on the at least the third magnetic element.

- ❖ Programming at least a third magnetic element of a second adaptive current source, the second adaptive current source including a second programmable current source for programming the portion of the plurality of magnetic memory cells, the second programmable current source including a second controller and a second current source coupled to the second controller, the second controller for determining a second current provided by the second current source based on the at least the third magnetic element, the second controller including the at least the third magnetic element, the at least the third magnetic element being substantially the same as the first magnetic element.

Conclusion

7. When responding to the Office action, Applicants are advised to provide the Examiner with line and page numbers of the application and/or references cited to assist the Examiner in the prosecution of this case.

8. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Michael T. Tran whose telephone number is (571) 272-1795. The Examiner can normally be reached on Monday-Thursday from 7:30-6:00 P.M.

9. Any inquiry of a general nature or relating to the status of this application

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should be directed to the Group receptionist whose telephone number is (571) 272-1650.

A handwritten signature in black ink, appearing to read 'Michael T. Tran', with a stylized, flowing script.

Michael T. Tran
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December 6, 2004